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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/686,917      | 10/09/2000  | Seung-Ho Hong        | MESO0026            | 5486             |

7590 06/21/2005

Law Offices of Ronald M. Anderson  
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EXAMINER

DOROSHENK, ALEXA A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1764

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/686,917

Applicant(s)

HONG ET AL.

Examiner

Alexa A. Doroshenk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 32-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-50 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4-6-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 6, 2005 has been entered.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: Applicant is now claiming priority to US Patent No. 6,488,900. Since applicant claims this priority as a continuation-in-part, a new oath or declaration is required referencing said priority. See 37 CFR §1.63 (e).

### ***Specification***

3. The disclosure is objected to because of the following informalities: The status of application 09/422,206 should be updated as it is now US Patent No. 6,488,900.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Cleary (5,326,537).

With respect to claim 1, Cleary discloses an apparatus comprising:

a stacked plate heat exchanger (10) comprising a plurality of untreated fluid channels (36) and a plurality of treated fluid channels (37) which are formed by a plurality of sheets stacked together (in a spiral form) so that the untreated and treated fluid channels are alternating (see figure 4);

an inlet (38) to the untreated fluid channels (36);

an outlet (39) from the treated fluid channels (37); and

a thermal treatment zone (27) disposed within the stack (10) and in communication with the untreated and treated fluid channels.

With respect to claim 2, Cleary further discloses wherein the housing is insulated (col. 3, lines 1-5).

With respect to claim 4, Cleary further discloses a catalytic treatment zone (15) adjacent to the thermal treatment zone (27) and within the plurality of channels (see figure 4).

With respect to claim 5, Cleary further discloses wherein the catalyst is disclosed as the oxidizing noble metal platinum (col. 1, lines 5-24).

With respect to claims 6 and 8, the temperature at which the apparatus is maintained is an operational condition which does not further limit the structure of the

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device. An apparatus claim covers what a device is, not what a device does. MPEP 2114. Therefore, the claim continues to read on that of Cleary.

With respect to claim 7, Cleary further discloses wherein the heater is an electric heater (col. 2, lines 22-31).

With respect to claim 9, Cleary discloses wherein the thermal treatment zone can act to lower the temperature of the device (col. 5, lines 37-57) and therefor act as a "chiller".

With respect to claim 11, while Cleary discloses that the apparatus is made of metal and desired to be lightweight (col. 2, lines 32-39) therefore the disclosed plates read on a metal foil.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary (5,326,537), as applied to claim 2 above, and further in view of Beckwith (2,937,780).

With respect to claim 3, Cleary discloses wherein the housing is insulated with a lightweight insulation material (col. 3, lines 1-5) such as mineral wool, but fails to disclose wherein the material is aerogel.

Beckwith teaches wherein aerogel is a known lightweight insulation material which is interchangeable with a glass wool (col. 4, lines 6-7). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to use the aerogel of Beckwith for the insulation material of Cleary since it is a lightweight insulation material known to be interchangeable with wool type insulation materials and meet the requirement of Cleary that the insulation be lightweight.

***Allowable Subject Matter***

8. Claims 32-50 are allowed.
9. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

10. Applicant's new claim to priority to the '900 reference makes it unavailable as prior art, therefore a new grounds of rejection has been presented above.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

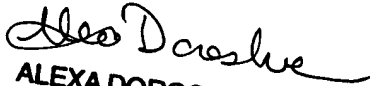
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa A. Doroshenk  
Examiner  
Art Unit 1764

June 16, 2005

  
ALEXA DOROSHENK  
PRIMARY EXAMINER